Issues to Address with EPA on Oil and Natural Gas Production Regulation

NSPS Regulation should be based on Volatile Organic Compounds – Not Methane

Air emissions from oil and natural gas production operations are a combination of VOC and methane. Technically, reducing VOC also reduces methane.

Past efforts to regulate methane are principally based on opening a regulatory pathway to regulate existing sources

Existing source regulation is complicated because –

Oil and natural gas production facilities are constantly changing as natural depletion phases out old wells and requires development of new ones

Requirements from 2012 NSPS (Subpart OOOO) are rapidly becoming the dominant component of existing sources that are not low producing wells

Approximately 80 percent of existing oil wells and 2/3 of existing natural gas wells are low producing wells that cannot absorb the cost of NSPS requirements

NSPS requirements are not based on managing low producing well emissions including when those requirements are imposed under the modification aspect of NSPS

EPA should exclude low producing wells from the NSPS requirements

Low producing oil wells average about 2.7 barrels/day; low producing natural gas wells average about 22 mcfd; cost effectiveness analyses for NSPS are not based on the economics of these small wells

Triggering the array of regulations in Subparts OOOO and OOOOa when a well is refractured – and thereby, defined as a modification – will be too costly a burden and result in wells being shut in rather than continue to operate

The costs of the fugitive emissions program in Subpart OOOOa will result in a reduction of new wells being drilled. Any wells that are drilled, because of the perpetual cost, will be shut in much earlier in their production life, reducing ultimate resource recovery. And, the regulatory costs will make the wells unappealing for sale to smaller producers – a common industry practice by larger producers – because these small producers survive with low-cost operations.

EPA should not impose the NSPS requirements on modifications and it should terminate the fugitive emissions requirements when a well falls below the 15 barrels/day or 90 mcfd production threshold

EPA should use its authority to subcategorize regulations to develop low producing well regulations – if needed

EPA has the authority to subcategorize facilities under the Clean Air Act – "The Administrator may distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards."

EPA should acquire data and cost information on low producing wells to determine –

The significance of their emissions and the significant sources

The costs and economics of their operations

The impact of the 2012 NSPS on the distribution of these emissions over the next decade when new requirements would be phasing in

EPA should determine whether meaningful additional regulations are needed and, if so, develop regulatory proposals based on the Best System of Emissions Regulations as developed for these specific low producing well operations

EPA needs to revisit its cost effectiveness analyses generally

EPA's benefits are largely based on economic values that are inconsistent with market prices – notably $4/mcf natural gas prices

EPA's control costs are understated particularly as well production inevitably declines, an issue that comes into play significantly on the fugitive emissions regulations that are an enduring operating cost for the life of the well and with regard to modifications

EPA should suspend or withdraw its Control Techniques Guidelines for existing oil and natural gas production operations in Ozone NAAQS nonattainment areas until it revises NSPS; EPA needs to develop RACT for CTG

The current CTG essentially applies the same requirements to existing sources that apply to new ones

These requirements will overwhelmingly fall on low producing wells

EPA needs to develop Reasonably Available Control Technology that reflects existing operations and low producing wells

EPA should work with industry to develop an array of voluntary programs to facilitate air emissions management

Industry is prepared to work with EPA to develop potential voluntary reduction programs, including actions on existing operations

These could be implemented faster than regulations

EPA should base its test for modification consistent with Section 111 of the Clean Air Act

"The term 'modification' means any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted"

Refracturing a well does not necessarily increase emissions if the processing equipment is capable of managing the production

Refracturing is generally necessary to recover production as a well declines; consequently, it will not likely raise production above its prior initial production

Since the well would already be connected to gas handling equipment, emissions are not likely increased; therefore, EPA needs to determine under what

circumstances production changes actually increase emissions to determine what constitutes a modification under the Clean Air Act

EPA should revise its definition of hydraulic fracturing and related provisions

EPA bases its need for the emissions regulations on the development of high volume water fractured shale oil and natural gas wells with horizontal legs

EPA's definitions capture small conventional vertical wells that use relatively small volumes of water and non-water fracturing fluids such as nitrogen that do not produce comparable completion emissions and are not economically manageable by the Reduced Emissions Completions (REC) technologies

The definition in Subpart OOOOa should be amended to explicitly exclude conventional wells because the work performed does not meet the definition provided in the regulation

While the operations do utilize pressurized fluids that contain water, proppant, and/or chemicals, the process neither penetrates tight formations like shale or coal, nor does the process utilize high rates or volumes; therefore, the operations rarely have extended flowback, and often have little to no flowback.

Similar to the issue of redefining modification, some operations falling under the hydraulic fracturing definition, like refracturization acidizing and similar operations, do not generate a high rate of flowback and should not be subject to REC requirements

Update definition of flowback to clarify that coil tubing cleanouts, screenouts, drilling plug outs are not subject to the hydraulic fracturing flowback provision

Clarification is required regarding the location of a separator for well completion operations. The rule does not provide a definition of "on-site" – preamble language clearly considers allowance of "nearby" REC equipment

EPA fugitive emissions requirements need to have the flexibility to change with experience

The current Subpart OOOOa fugitive emissions program locks in a static testing structure (e.g., twice per year) and static processes (e.g., optical gas imaging)

EPA should allow for permitting alternative approaches such as –

EPA should assure that compliance with state regulatory requirements are considered equivalent to new federal regulations

In particular, multiple states have developed or are developing fugitive emissions programs; none of these are the same as the NSPS Subpart OOOOa requirements

In reviewing and revising Subpart OOOOa, EPA needs to assure that these state programs are recognized as alternative compliance under as state enforceable permits (e.g., like the storage vessel treatment under Subpart OOOO).

EPA should allow for fugitive emissions monitoring to be altered based on experience with emissions management

If testing shows that maintenance programs are preventing emissions for extensive times, monitoring cycles should be extended to annually or biennially or longer

EPA should allow for information that shows emissions patterns can target specific equipment to provide for maintenance based programs to supplant the emissions testing requirements and extend or eliminate regular emissions monitoring

EPA should provide for an exemption or exclusion from the fugitive emissions requirements for oil wells based on Gas to Oil Ratio (GOR) such as the approach for REC that limits requirements for wells with less than 300 scf of gas per stock tank barrel of oil produced or such as the use of a gas throughput threshold

EPA should allow for the fugitive emissions program to be altered based on emerging monitoring technologies that are more cost effective such as internet based monitors or other technical advances

EPA should make the application and approval process easier so that new technologies can actually be approved and within a reasonable time for leak detection under this rule – EPA should specifically provide for a process in the regulations rather than rely on the "alternative method of emissions limitation" process under Sec. 111(h) of the Clean Air Act

Alternative if 111(h) AMEL process is required:

Clean Air Act 111(h) allows for "a person" to apply for AMEL so allow states (v. operators) to show EPA that their LDAR program qualifies as "equivalent" and allow vendors or manufacturers of new technology to make the case to EPA that their technology is "equivalent" per 111(h)

Allow application/approval to be made for all upstream sites or specific of basin for example (not site-specific; 111(h) was written for large facility like refinery, not small individual sites spread over large areas

Allow modeling to show "equivalency" in technologies.

EPA should revise the fugitive emissions monitoring requirements to reflect that multiple wells are drilled at a single site and each well should not trigger redundant monitoring of support facilities that are already subject to fugitive emissions monitoring as a result of prior wells

EPA should revise the approach to regulating storage vessels including:

Its basis for flashing assumptions in storage vessels and its approach to address multiple tank batteries

Its continuing application to storage vessels that subsequently fall below the threshold for application of the regulations

EPA needs to revisit its compressor requirements

Some producers must use low volume compressors that are not on the well site to move gas production into pipeline systems

The current requirements when applied to these low volume compressors, typically operated by small businesses, are not cost effective, including the required quarterly surveys

EPA generally needs to revise its extensive recordkeeping requirements, such as those that compel detailed records for facilities (e.g., storage vessels) that fall below the threshold for an affected facility

EPA should work with industry to develop common sense approaches to develop adequate information on facilities as they move from new operations to ongoing operations and their production and emissions decline

Certification by Professional Engineer – CVS & Pneumatic Pump Feasibility

Remove PE certification for Closed Vent Systems (CVS) and for pneumatic pump technical infeasibility determinations and replace with technical assessments

Existing general duty obligations and the certifying official's acknowledgment of compliance within annual report

PE certification process does not add any significant value beyond a technical assessment

Not all PEs have expertise in facility design, while there are technical experts that could perform the assessment

Most operators currently use consultants

EPA has not justified the extra expense and burden of PE certifications

One option is to update definition of Qualified Engineer: Qualified Professional Engineer means an individual who is licensed by a state as a Professional Engineer to practice one or more disciplines of engineering and **<u>or</u> who is qualified by education, technical knowledge and experience to make the specific technical certifications required under this subpart**. Professional engineers making these certifications must be currently licensed in at least one state in which the certifying official is located.

Pneumatic Pumps

Allow technical infeasibility assessment at all well sites and eliminate the classification of sites as "greenfield" and "non-greenfield"

These terms were not proposed

Concept is contradictory to the rule not requiring installation of a control device or process equipment for the sole purpose of controlling a pneumatic pump

At a minimum, brownfield must be further clarified to mean "after start of production begins" (i.e., a site doesn't stay "greenfield" forever)

Simplification of CVS Compliance Assurance

Short Term (minimum request)

Align compliance assurance for pneumatic pumps to storage vessels (and not provisions for centrifugal and reciprocating compressors)

If pumps not aligned to storage vessels, then at minimum remove annual M21 in 60.5416a(a)(2)(ii)

Longer Term

Simplification (full rework) of the CVS and cover requirements

Align under a common framework – Desire to alignment across source types (pumps, compressors, storage vessels) as current requirements add complication and burden without providing benefits

EPA has acknowledged that CVS requirements are confusing

OGI – Seeking application of OGI to satisfy CVS and cover inspection requirements – Application of OGI (LDAR type provisions) to the CVS and cover inspections would provide same outcome through a more efficient approach that reduces burden on operators (e.g., only need OGI technicians for a given area and not Method 21 trained staff, efficiency of OGI, etc.)